

## Claims

What is claimed is:

- 5 1. A method for demolishing concrete that is reinforced by an iron-containing member comprising:  
disposing a counter electrode in electroosmotic communication with an exposed  
surface of the concrete;  
coupling the terminals of a power supply to an exposed portion of the iron-  
10 containing member and the counter electrode; and  
applying an electrical potential between the iron-containing member and the  
counter electrode.
- 15 2. The method of claim 1, further comprising:  
supplying an electrolyte solution to the surface of the concrete.
3. The method of claim 1, wherein the counter electrode is an iridium-coated  
titanium mesh.
- 20 4. The method of claim 1, wherein the counter electrode comprises iron.
5. The method of claim 1, further comprising:  
varying the amount of current supplied from the power supply.
- 25 6. The method of claim 1, further comprising:  
alternating the polarity of the potential being applied between the iron-containing  
member and the counter electrode.
- 30 7. The method of claim 1, wherein the counter electrode is not disposed within the  
concrete.

8. The method of claim 7, wherein the counter electrode is disposed only on the surface of the concrete.

9. The method of claim 8, further comprising:

5 supplying an electrolyte solution to the surface of the concrete.

10. The method of claim 8, wherein the counter electrode is a metal screen.

11. The method of claim 1, further comprising:

10 varying the amount of current supplied from the power supply.

12. The method of claim 1, further comprising:

alternating the polarity of the potential being applied between the iron-containing member and the counter electrode.

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